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| JENNISON, BRIAN W | | | | |
| COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576 | | | ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,528

Applicant(s)

STIEGLBAUER ET AL.

Examiner

BRIAN JENNISON

Art Unit

3742

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 7/22/2009

Response to Arguments

1. Applicant's arguments with respect to claims 1-10, 19-24 have been considered but are moot in view of the new ground(s) of rejection.

In regards to applicant's arguments on pages 9 and 10 of the reply referencing Erras not teaching the guide groove. There is a groove in a recess in the electrode cap for guiding the strip and one having ordinary skill in the art would form a guide groove in the tong arm based on the positioning of the rollers for guiding the strip. See new rejections below. The rollers 9a and 9b would also be mounted on a body or the arms.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat.

App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation workpieces, and the claim also recites in particular sheet metals which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erras et al in view of Caprioglio (US 5,811,750).

Erras et al teaches:

Regarding Claim 1: Spot welding tongs for robotic applications for the resistance welding of workpieces and, in particular, sheet metals, ("**robot-led welding tongs**" used to perform resistance welding See Paragraph 7, Line 13 of machine translation provided) of the type including tong arms which are each

pivotally mounted on a base body (**Tongs are defined as any of various implements consisting of two arms hinged, pivoted, or otherwise fastened together, for seizing, or holding**) and adjustable by an actuating means (**Since the tongs are robotic they must include an actuating means for moving the tongs to perform the welding**) and to which electrode holders for the electrodes (**See Fig. 2 which shows the electrode holder 1 and the electrode cap 4**) are fastened, and further including winding means comprising a wind-off roller and a wind-up roller for winding off and on a strip for the protections of at least one electrode, (**See Paragraph 12 which describes the coil 9a for unwinding the strip 10 and the coil 9b for winding up the strip 10 for protecting the electrode.**) wherein the wind-off roller and the wind-up roller (ii) of the winding means are arranged on the base body or on the tong arm, (**the coils 9a and 9b are capable of being arranged on the tong arms 2**) and that at least one guiding groove is provided on the electrode holder for the guidance of the strip along the tong arm. (**See Fig 3 which shows the recess 7 for guiding the strip section 5 along the tong arms 2. See also Paragraph 11, Line 1**)

Erras et al fails to teach

Regarding Claim 1: at least one guiding groove comprising a recess on the tong arm.

Regarding Claim 2: Spot welding tongs wherein means for guiding and deflecting the strip, in particular deflection pulleys and slide surface, are provided on the tong arm and/or electrode holder.

Caprioglio teaches:

Regarding Claim 1: Fig 2 shows rollers with grooves having a recess along the length of the tong arm.

In view of the teachings of Caprioglio it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Erras the guide groove with a recess since Caprioglio teaches rollers with a guide groove and recess which form a groove with a recess along the length of the arm for guiding the strip during welding.

Erras et al also teaches:

Regarding Claim 2: Spot welding tongs wherein means for guiding and deflecting the strip, in particular deflection pulleys and slide surface, are provided on the tong arm and/or electrode holder. **(The coils 9a and 9b would be mounted on the tong arm or the holder.)**

Regarding Claim 3: Spot welding tongs according claim 1, wherein the wind-off roller and/or the wind-up roller is coupled with a driving means and, in particular, an electronically activatable motor. **(The coils 9a and 9b are operated by a driving mechanism for feeding the strip 10. See Paragraph 7, Lines 10-11)**

Regarding Claim 4: Spot welding tongs according to claim 1, wherein the tong arm is formed by a base section, and that side pieces are arranged on either side of the base section to project beyond the base section, and thus formed depression is designed as a guiding groove for the strip. **(Fig 3 shows a recess 7 in the base of the arm which is formed by two sides extending beyond the base section)**

Regarding Claim 5: Spot welding tongs according to claim 4, wherein at least one cover plate is arranged on the end sides of the side pieces to cover the guiding groove formed between the side pieces. **(The receptacles 8, as seen in Fig 4, cover the recess 7 and are arranged on the end of the sides which extend beyond the base to form the recess 7)**

Regarding Claim 6: Spot welding tongs according to claim 1, wherein the tong arm is formed by a base section with the guiding groove being incorporated in the base section. **(Fig 3 shows a recess 7 in the base of the arm which is formed by two sides extending beyond the base section)**

Regarding Claim 7: Spot welding tongs according to claim 1, wherein the guiding groove is formed by additional guiding elements which are provided, for instance slipped or screwed, on the tong arm and/or electrode holder.

(The receptacles 8, as seen in Fig 4, form a u-shaped groove which cover the recess 7 and are part of the groove or recess for guiding the strip over the electrode.)

Regarding Claim 8: Spot welding tongs according to claim 1, wherein the tong arm is 'comprised of several individual components which are connected with one another in a manner that a hollow space is formed in the center of the tong arm for the guidance of the strip. **(The receptacles 8, as seen in Fig 4, are provided for forming a hollow section on the tong arms for guiding the strip. See Paragraph 11, Lines 5-6)**

5. Claims 9-10, 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erras et al as modified by Caprioglio in view of Nishimura (JP 05192774 as cited by applicant) and Suita (US 2001/0045413).

The teachings of Erras et al as modified by Caprioglio have been discussed above.

Erras also teaches: (re claims 19 and 21) plurality of tong arms which would be pivotally mounted on a base, the electrode holders 1, two electrodes, winding mechanism. **See Figs 1 and 3.** (re claims 20 and 21)The guide groove 7 is on the electrode holders. **See Fig 3.)**

Erras et al fails to teach (re claim 9) Spot welding tongs according to claim 1, wherein a braking device is provided to fix and stretch the strip. (re claim 10) Spot welding tongs according to claim 9, wherein the braking device is connected with a control unit. (re claims 19 and 21) Actuating means and the winding rollers on the base body.

Nishimura teaches (re claim 9) The 1st rolling-up means 31 is attached to the upper electrode 5 side of the welding gun 1. The 1st rolling-up means 31 comprises the stepping motor 32, the torque sensor 33, the connecting shaft 34, and the driven shaft 35. The torque sensor 33 is connected with the output shaft of the stepping motor 32. **(See Paragraph 25, Lines 1-3)** The torque sensor allows the motor to function as a brake capable of fixing and stretching the strip, if the wind up motor is running when the wind off motor is stopped, in a spot resistance welding device. (re claim 10) Drive controlling of the stepping motor 32 is carried out by the control means 81. **(See Paragraph 25, Line 7)** The control unit stops and starts each motor and reel. (re claims 19 and 21) Nishimura teaches the actuating means shown in drawing 2 for adjusting the tong arms.

In view of Nishimura's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include, the brake and controlling unit since, Nishimura teaches a device including, a torque sensor, stepping motor, connecting shaft and driven shaft, functioning as a brake since, Nishimura teaches these devices

for detecting and fixing abnormalities of the band which protects the welding electrode and the actuating means or pneumatic cylinder for moving the tong arms to perform the welding process.

Erras discloses the claimed invention except for the winding rollers on the body. It would have been obvious to one of ordinary skill in the art at the time the invention made to have the winding rollers on the body, since it has been held that rearranging parts of an invention involves only routine skill in the art. (In re Japiske, 86 USPQ 70.)

Erras et al as modified by Caprioglio:

Regarding Claims 22-24: The pressure element and spacer.

Suita teaches:

Regarding Claims 22-24: Fig 3a shows a sensor for detecting pressure and a spacer between the sensor in the region of the electrode. **See Paragraph [0073].**

In view of the teachings of Suita it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Erras as modified by Caprioglio the pressure sensor and space since Suita teaches a pressure sensor and spacer in the region of the electrode for detecting a pressing force imposed on the welding tip.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN JENNISON whose telephone number is (571)270-5930. The examiner can normally be reached on M-Th 7:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN JENNISON/
Examiner, Art Unit 3742

11/13/2009
/TU B HOANG/
Supervisory Patent Examiner, Art Unit 3742